REQUESTING SERVICE: IMAGING SERVICE
SHIP TO: VA MEDICAL CENTER
V.A. Medical Center
A&MMS (90D)
BUILDING 19
1900 E MAIN ST
DANVILLE, IL 61832

Qty	Item Description
1	**Ysio Max**
1	**Ysio Max Ceiling Carriage 3 m** Universal digital radiographic workplace for skeletal radiography of the recumbent, standing or seated patient. High-resolution, permanently installed or wireless detectors as a basis for a fully digital imaging chain with a digital imaging system, an image and control station with application and evaluation programs, and DICOM network connection. Tube assembly support fully motorized in all projection-relevant axes with up to 220 cm transverse travel. OPTITOP 150/40/80 X-ray tube assembly and multileaf collimator with full field and laser line light localizer.
1	**Ceiling rails 4.25m** 2 tracks for the ceiling-mounted support with a travel distance up to a maximum of 4.25 meters in longitudinal direction.
1	**MAX wi-D** Light-weight mobile, wireless 35 cm x 43 cm (14" x 17") detector with handgrip for comfortable and safe handling. The detector can be used with all other MAX systems based on the MAXswap feature.
1	**MAX wi-D Clip-on Grid 5/85 F115** Grid (5/85), f 115 cm Highly selective anti-scatter grid for scattered radiation reduction: - Pb 5/85 (grid ratio 5:1, 85 lines/cm) - Grid focusing for SID 115 cm (45")
1	**Bucky Wall Unit with MAX static** Floor-mounted Bucky wall stand with height-adjustable and tiltable detector tray with a MAX static flat detector for digital acquisitions. With IONTOMAT three-field chamber and Bucky frame. Detector Bucky operated from the right side. Vertical height adjustment and detector tilt possible from both sides.
1	**Ysio Table for MAX wi-D** Bucky table in compact design, for X-ray exposures of the entire body with detector tray for MAX wi-D.
1	**Foot Kick Switch Front and Rear** For height adjustment of the patient positioning table and switching of the floating tabletop.
1	**Int. charg. Unit MAX wi-D (cradle)** Charger unit for charging the MAX wi-D rechargeable battery when the detector is in the charging cradle (table or BWS).
1	**Charger f. MAX wi-D and MAX mini** This charger can be used to charge the replacement batteries for the MAX mini and MAX wi-D detectors.

Qty	Item Description
1	**WLAN US** WLAN access point for operating the MAX wi-D or MAX mini detectors Important: USA only
1	**Configuration 2 Detector System** Quantity of 2 configured MAX detectors
1	**Polydoros 80 kW** High-frequency 80 kW X-ray generator for diagnostic procedures at workplaces with automatic exposure control.
1	**Caremax plus HS Integrated** CAREMAX plus Dose Area Product (DAP) meter tracks and displays the Dose Area Product (DAP) and/or standardized patient entrance dose.
1	**19"Color Flatscreen Display** 19" LCD color flatscreen display with high luminance and extended field of view.
1	**Transparent grid 13/92, Universal** Highly selective anti-scatter grid for scattered radiation reduction.
1	**SmartOrtho License** SmartOrtho is an automated tilting technique for long leg and full spine imaging. Up to 4 single images can be acquired to cover the selected region with the patient in standing or lying position. The images are automatically composed into a single image on the imaging system.
1	**Ortho Stand** The Ortho support stabilizes the patient during the Ortho examination, such as long leg and long spine imaging to prevent motion artifacts. It places the patient in an upright position and allows safe movement of the bucky tray during the image acquisition procedure. The package includes: - Ortho ruler - Ruler holder - Patient hand grips, left and right - Additional platform for smaller patients (e.g. children) and to make sure that the whole patient body can be mapped - removable
1	**DICOM WORKLIST & MPPS** Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist) as well as feedback on the examination status with DICOM MPPS (Modality Performed Procedure Step).
1	**Keyboard, US English** PS2 standard keyboard
1	**Initial onsite training 24 hrs** Up to 24 hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	**Offset onsite Training 24 hrs**
1	**Additional onsite training 12 hours** Up to (12) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

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1	**Offset onsite Training 12 hrs**
1	**Portable DR Panel Protector(14x17)** The unique design of the DR Panel Protector provides an easy way to take weight-bearing x-rays of feet (AP view). The unit is simply placed over the DR panel which is first positioned on the floor. Patients step onto the DR Panel Protector with as much weight as needed to get the desired image. The face plate is made of polycarbonate designed to support patients weighing up to 500 pounds. The face plate is x-ray lucent, allowing the x-rays to pass through the DR Panel Protector with no significant absorption or scattering. The non-slip rubber floor grips keep the DR Panel Protector from slipping on a hard floor. The Panel Protector frame is notched to accommodate the cable connection from the digital DR panel to the host system. One year warranty through Clear Image Devices
1	**Mobile detector holder (DR)** The versatile holder 1330/3 accommodates portable DR Panels, CR and Film Cassettes from 24x30cm to 35x43cm. Compatible with Mobilett XP Digital and Ysio wi-D detectors.
1	**Standard Rigging DigRad**
1	**VA Kit** Second set of documentation for Veterans' Affairs Administration Hospitals in the U.S.

One complimentary biomedical tuition is included with the purchase of this system.

Project # 2016-2144, AXIOM Aristos MX/ VX system, de-install: 1/2017, expires: 12/22/2016

XPRF_PR_IB_RAD_LPG_Radiography IB Loyalty Prog @

Detailed Technical Specifications

Description

System Configuration
Ysio Max is an universal digital radiographic workplace with various flat detectors (MAX wi-D, MAX static) for image acquisition.

The Ysio Max digital workplace is especially suited for a high patient throughput. As a universal workplace, the system is primarily used in X-ray departments of hospitals, in radiological and partly radiological offices with high patient throughput and standardized acquisition technology.

Basic system components:

- A ceiling-mounted tube assembly support with X-ray tube assembly and motorized multileaf collimator.
- An imaging and control station with application and evaluation programs, as well as DICOM system interfaces.
- CD/DVD drive for digital image storage on CD-R/DVD for offline data exchange in DICOM format.

Tube assembly support
with X-ray tube assembly and motorized collimator.

All projection-relevant tube assembly positions can be manually adjusted with handles symmetrically mounted to the tube assembly collimator unit.

The ceiling-mounted tube assembly support can be adjusted in 3 axes for longitudinal, transverse, and height adjustment (x, y, and z-axes).

- Horizontal travel range in longitudinal direction 346 cm.
- Horizontal travel range in transverse direction 220 cm.
- Vertical lift 180 cm.

In 2 further axes (α- and β-axes) the tube assembly collimator unit can be manually adjusted for oblique acquisitions of the recumbent patient, or for horizontal, oblique, or lateral acquisitions on the portable detector, or for free bedside acquisitions.

- Rotation around the vertical axis of the ceiling-mounted support from +154° to -182°. Lock-in positions every 90°.
- Rotation around the horizontal axis of the tube assembly support arm ±140°. Lock-in positions at 0° and ±90°.

X-ray tube assembly OPTITOP 150/40/80 HC-100:
Single-track dual-focus rotating anode tube with compound anode (rhenium-tungsten, molybdenum, graphite), with high heat storage capacity and high load capacity for small focal spots. Integrated overpressure safety device in the tube protective housing.

- 150 kV nominal voltage acc. to IEC 613.
- Nominal power (focal spot nominal values acc. to IEC 336):
  40 kW: small focus 0.6
  80 kW: large focus 1.0
- Anode speed ≥ 8,500 r/min, anode angle 12°.
- Heat storage capacity of the anode 580 kJ (783 kHU) acc. to IEC 613.
- Total filtration (IEC 601-1-3) ≥ 2.5 mm Al equiv.

Multileaf collimator:
With full field and laser line light localizer. Rectangular collimation, manual and motorized, via organ programs.

- Multileaf collimator rotatable by ±45° around the center beam axis, e.g. for correct positioning of objects.
- A tape measure is integrated to check the focus-to-object distance.
- To improve radiation quality through dose reduction of the soft radiation parts, Cu filters (0.1Cu; 0.2 CU and

Description

0.3 Cu) are inserted into the primary beam projection, depending on the organ program selected. They can also be selected manually.

Option:
A measuring chamber for the Dose Area Product can be integrated into the multileaf collimator.

Controls and displays
The control elements at the tube assembly and the multileaf collimator are ergonomically arranged for single-handed operation.

Controls and displays at the tube assembly support (MAXTouch):
Multifunctional control display with color touchscreen for adaptation of acquisition parameters directly in the examination room.

Displays include:

- The collimation size of the acquisition field (in cm x cm).
- The selected SID.
- The selected Cu additional filters.
- Rotation from the 0-position.
- Tube assembly and detector centering.
- Operating states such as "ACSS/Manual", "Ready", "Selected", etc.
- Current detector angle (MaxAlign feature) – to eliminate the need to quess the tube angle and to protect the patient by reducing repeat exposures. Available with MAX wi-D and MAX mini.

The display follows the tube assembly orientation.

The following functions can be set manually at the multileaf collimator:

- Full field light localizer with timer for optical display of the collimated acquisition format and an optionally coverable laser line light localizer.
- The collimation of the acquisition format set last can be retrieved via a memory button.
- The rectangular collimation of the radiation field is pre-defined through the organ program and can be set manually by means of two dials.
- The motorized insertion of the Cu additional filters is controlled via the organ program, but can also be selected freely.

Imaging and control station (*syngo* FLC)
The entire control and communication of the radiography system incl. digital image processing takes place from a central operating site - the imaging and control station.

It includes:

- A high-end PC imaging system, based on Windows 7 with *syngo* user interface.
  Storage of original data 14 bit.
  Storage of image data 12 bit.
  Storage capacity approx. 10,000 images.
- Keyboard and mouse.
- One 19" color flat-screen as control display or diagnostic display.
- Manual button for exposure release.

Functions of the imaging and control station
Patient and study administration:

- Importing of patient lists and examinations from the HIS/RIS
- Manual patient registration
- Patient, study, and image data management
- Configuration functions

Acquisition and postprocessing:

- Organ program selection and configuration

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- Selection of generator and diaphragm parameters.
  Parameterization of image preprocessing: enhancement, harmonization, edge enhancement, and look-up tables (LUT)
- Display of current acquisition between 1.5 and 3.5 seconds (preview); complete image in 3.5 to 6 seconds max. depending on detector type
- Display of image markers (L/R, a.p./p.a.)
- DiamondView Plus: multi-scaling procedure for image post-processing with high detail contrast and reduced noise

DiamondView is a multi-scale procedure, i.e. filter size and strength are weighted differently and are used for adaptation to the overall image content.

- DiamondView enhances the signal exploitation of the dynamic range and improves the organ-specific detail contrast (soft tissue and bone).
- DiamondView can be selected via the "Pre-processing card".
- By entering "0", the image can be displayed without DiamondView.

Image processing functions:

- Image rotation
- Horizontal/vertical image mirroring
- Image zoom
- Pan
- Windowing
- Filters for edge enhancement and noise reduction

Image documentation and archiving:

- Image transfer to the network
- Automatic, user-configurable data distribution (DICOM Send, see also system interfaces DICOM)
- Automatic filming with virtual film sheet (DICOM Print, see also system interfaces DICOM)
- Image data export (12 bit) on CD/DVD

Workflow
Routine workflows are largely automated.

- Prior to exposure the patient data is transferred via the patient management system (HIS/RIS: option) or entered through the control console. The exposure parameters are selected through the organ programs.
- Then the patient or the acquisition system is positioned and exposure is released.
- The exposure released at the central system control is read out within a few seconds by the detector. It is displayed at the control display for orientation and made available in DICOM format at the imaging system output for sending e.g. to reporting workstations, image networks, laser cameras, etc.
- Clinical Assurance Program (CAP): Collection of deleted images, studies and patient data, including evaluation capabilities.

Password protection:
System access protected by password.

Option:
Security Package: SW option with enhanced security features such as User Management and Audit Trail function (if offered, see text of the corresponding components).

DICOM system interfaces

- DICOM Send: Sending of images into the DICOM network.
  The DICOM Send function enables fully automatic transfer of generated image data to a DICOM archive or a DICOM workstation. The user can perform his examinations without interruption while the system fully automatically transfers the images to the archive. This image data transfer takes place entirely in the background and thus does not affect acquisitions performed at the same time.

- DICOM Storage Commitment (StC): Feedback from the image archive.

Description

The DICOM StC function automatically gives feedback on whether the generated image data were successfully transferred. This way the user can be sure that the acquisitions stored locally in the imaging system can be deleted.

- DICOM Print: Printing of images by means of a virtual film sheet on a DICOM laser camera.
  Selecting "Auto-Print" automatically forwards the images stored in the virtual filmsheet to the laser camera. This optimizes the workflow, eliminating the need for user interaction. In addition, a specific layout can be configured on the virtual filmsheet, which the user can review and edit on the monitor at any time. As a result, printing is only required after the layout has been optimized on the monitor, saving time and costs.

Options:

- DICOM Modality Worklist/MPPS
- DICOM Query/Retrieve

Note concerning DICOM interface(s)
For diagnostic purposes, only hardcopy cameras/laser printers explicitly approved for this system may be used.

The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case that available configurations are not sufficient. With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

***syngo* Remote Assist**
syngo Remote Assist is a standalone service option.
With *syngo* Remote Assist, Siemens uses a secure broadband VPN connection (VPN = virtual private network) to establish a connection to your Siemens imaging console in order to offer you direct, real-time support and training. This seamless and simultaneous virtual interaction will contribute to improvements in image quality and optimization of system use.

Siemens Remote Service
Prepared for optional Siemens Remote Service SRS (during warranty period, subsequently with service contract):

- Hardware and software remote diagnosis.
- System remote configuration, e.g. adding of a DICOM node.
- Early warning system to secure system operation.
- Functions according to the selected maintenance package.

Customer Care. Life - the customer care solution by Siemens Healthcare
From the moment you purchase your Siemens system you will benefit from many services that are offered by "Customer Care. Life* offers, e.g.:

- initial application training
- interactive e-learning for various applications
- free customer magazines
- arrangements for clinical training via a global network
- and free trial licenses

You will find detailed information on our e-learning program and further details on general "Customer Care. Life" services on the internet.

* "Customer Care. Life" offerings are not necessarily available to the full extent for all systems.

Technical details:

- Cesium iodide (Csl) scintillator with Amorphous silicon (a-Si) material

Description

- Detector acquisition matrix approx.: 2872 x 2354
- Pixel size: 148 µm
- Acquisition depth (gray scales): 16 bits
- Acquisition formats up to: 34.9 cm x 42.5 cm (13.7" x 17").
- Thickness: 19 mm
- Detector weight: 3 kg
- Max. load 150 kg (patient lying down) and 100 kg (patient standing).
- MAX wi-D - 1 battery
- Data transfer via W-LAN.

Operation time:

- At least 525 images
- Min. 3.5 hours under normal load
- Min. 6 hours in standby mode

Technical details:

- Grid ratio 5:1, 85 lines/cm
- Siemens lead/fibre technology
- Grid focusing for source-image-distance (SID) of 115 cm (45")
- Dimensions (W x H x D): 472.1 mm x 410.1 mm x 28.4 mm (18.58"x 16.14"x 1.1")
- Weight: 1.1 kg (2.4 lbs)

Detector Bucky
The detector Bucky with single-handed operation includes an IONTOMAT three-field chamber for automatic exposure control (incl. three-field templates) and a device for symmetric positioning of the flat detector.

- Front plate - detector distance ≤45 mm.
- Radiation absorption of the front plate ≤0.5 mm Al.
- A stationary, exchangeable transparent grid for scattered radiation reduction; 13/92. Optionally for SID 115 cm and/or 180 cm, or universal grid with a field from 115 to 180 cm (see tender further down).

Integrated MAX static 43 x 43 flat detector
Integrated, fixed flat detector for digital image acquisition, CsI-scintillator, amorphous silicon (a-Si).

- Detector acquisition matrix: 2869 x 2874
- Pixel size: 148 µm
- Acquisition depth (gray scales): 16 bit
- Acquisition formats: up to 42.5 cm x 42.5 cm

Accessories
Scope of delivery:

- Lateral patient handles for optimum patient positioning, e.g. during PA thorax exposures.
- Patient overhead handle, swiveling around the horizontal axis, for optimal patient positioning for lateral acquisitions.

Height-adjustable patient positioning table with floating tabletop and detector Bucky for wireless MAX wi-D detector.

Ysio Max table:

- Free access to table and patient from all sides.
- Patient positioning tabletop 80 cm x 240 cm.
- Longitudinal and transverse travel: ±48 cm and ±14 cm (±0.4 cm).
  (maximum longitudinal coverage without patient repositioning 190 cm)
- Height adjustment of the tabletop 44 cm: from 51.5 to 95.5 cm (±0.5 cm).

Description

- Radiation absorption ≤ 0.65 mm Al
- Max. patient weight 300 kg.
- Longitudinal movement of detector tray (from edge to edge) ≥100 cm.

Accessories
Scope of delivery:

- Lateral patient handles. The grips make patient positioning easier, and being able to hold on to the grips gives the patient a feeling of security.
- An adapter for positioning film/screen cassettes and/or image plate systems also designed for use with a flat detector tray.

Height adjustment, release, and locking of the floating tabletop is done through a foot kick switch. The foot kick rails are located in the foot area both at the front side and the rear side of the patient positioning table and can be programmed individually at the time of installation. This prevents accidental operation by patients or accompanying persons.

Charger unit for charging the MAX wi-D rechargeable battery when the detector is in the charging cradle (table or BWS). The charger unit is required if a MAX wi-D cradle was selected for the table or BWS. Also required for the configuration of the wi-D charging cradle on the table or BWS.

Space for 3 batteries, with LED indicator for charge status. The charger connects to a wall socket using a power cord.
This item includes the following components:

- 1x battery charger
- 1x power supply
- 1x battery

High-frequency X-ray generator with multipulse voltage waveform for diagnostic acquisition procedures at workplaces without FL function. The multi-pulse voltage waveform enables high data accuracy, precise reproducibility and short exposure times.

- Multi-processor system for organ programs.
- Free selection of radiographic parameters.
- Electronic generator monitoring during exposure.
- Tube load computer with acoustic alarm and interval display.
- Integrated automatic exposure control.

Generator control fully integrated in the system console.

Rating:

- 80 kW at 100 kV acc. to IEC 601.
  max. 800 mA at 100 kV
- Tube voltage: between 40 kV and 150 kV

Workplaces:

- max. 3 selectable workplaces (Bucky table, Bucky wall stand, and free acquisition).
- One (1) dual focus X-ray tube assembly can be connected.

Power connection:
3 phase current: 380 V, 400 V (±10%); 50/60 Hz.

CAREMAX plus Dose Area Product (DAP) meter is connected to the collimator via CAREMAX adapter cable. The Dose Area Product (DAP) is being displayed on the FLC image system and recorded in the exam protocol.

Description

The monitor features a very high contrast even under very bright ambient light conditions. The Gamma curve was precisely adapted to the CIE/DICOM recommendation and is thus suited especially for gray scale display.

Technical details:

- 19“ (48 cm) screen size
- Resolution: 1.280 x 1.024 (pixel)
- Maximum brightness (typ.): 280 cd/m^2
- Flicker-free and distortion-free image display
- Anti-glare screen

The controlled background lighting provides stable lighting throughout the entire product life cycle.

Technical details:

- Grid ratio 13:1, 92 lines/cm
- Grid focusing for source-image distance (SID) of 140 cm (55");
- Working range (SID) 115 cm to 180 cm (45" to 71")
- Siemens lead/fibre technology

SW license for Ortho function

- For systems with bucky wall stand:
  Ability to acquire up to 4 images of the legs or spine in sequence on the Bucky wall stand using a MAX wi-D, MAX static detector

  Only for Ysio:
  Ability to acquire up to 3 images at the patient table.

  Only for Multitom Rax:
  Ability to acquire up to 4 images of the legs or spine with RAX detector (patient in standing position or lying on the table)

Spine Composing
Spine Composing takes individually acquired digital radiographic images of the spine and composes them into an overall image.

The main functions are:

- automatic composing of digital radiographs into an overall image
- standard image post-processing functions are available

Ortho-Leg Composing
Ortho-Leg Composing takes individually acquired digital radiographic images of the legs and

The main functions are:

- automatic composing of digital radiographs into an overall image
- standard image post-processing functions are available composes them into an overall image.

Technical details:
- Dimensions (depth x width x height): 75 cm x 75 cm x 202 cm (30" x 30" x 80")
- Weight: 85 kg (187 lbs)
- Maximum patient weight capacity: 180 kg (397 lbs)
- Patient height: Up to 190 cm / 74" (standing)

DICOM MWL (Modality Worklist):
Import of patient/examination data from an external RIS/HIS patient management system.

DICOM MPPS (Modality Performed Procedure Step):
Sending of dose data, patient data, and examination data to an external RIS/HIS patient management system.

Description

Note concerning DICOM interface(s)
The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility.

A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.
With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply.

The holder rolls smoothly on large quick locking castors and facilitates examinations in accident and emergency departments, in operating rooms and radiographic rooms. The heavy duty base gives a low centre of gravity, which provides a precise and stable imaging platform.

Properties:
- The holder is adjustable for height from floor level to 120 cm (measured from its lower edge)
- The holder is counterbalanced for easy raising or lowering and can overhang the x-ray or operating table by 62 cm
- The holder can be turned & tilted and orientated to suit any examination position
- Effective locks keep the holder firmly in place